User's Manual

US300PM Ultrasonic Flowmeter

Manual Change No. 09-005E

This is the supplement for the original manual (No. IM 01G05B02-01E, 1st Edition) regarding the added and changed items as below. Please also refer to this supplement when you read the manual.

Addition to the chapter "2. Handling Precautions" (page 7) :

Attention!	The instrument must not be used in a corrosive atmosphere.

Addition to the chapter "4. Getting Started" (page 15) :

Attention!	The current outputs may temporarily turn unstable during the switch-on sequence and parameter display / setting mode. Take care of your process not to be affected by this behavior.

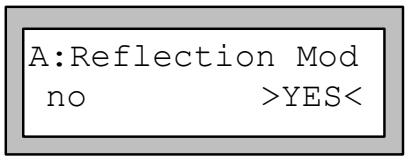
Addition to the section "4.2.1 Key Operations" (page 16) and related pages :

Refer to the following table for the function of corresponding key operations.
The correct explanations for these key operations in the related pages are also as the table below.
Related pages: "16.2 US300PM doesn't react anymore" (page 113)

BRK – INIT – C ENTER RESET	[Operation during the measurement or menu display] RESET: Press these three keys simultaneously to recover from an error. This has the same effect as restarting the unit. Data will not be affected. INIT (cold start): Press these three keys simultaneously and release **ENTER** first. After acknowledging the display of main menu, release (i) **BRK** key first and then (ii) **C** key. This will initialize the instrument. Most parameters and settings are reset to the factory default values. The memory will not be cleared. Note that when the data logging function is activated, the `DELETE MEAS.VAL.` display will appear instead of main menu. In this case, after releasing (i) **BRK** key first and then (ii) **C** key, select `NO` or `YES` and then press **ENTER** to finish the procedure.
ON BRK – INIT – C	[Operation when powering the instrument on] INIT (coldstart): Pressing these two keys simultaneously and after acknowledging the display of main menu, release (i) **BRK** first and then (ii) **C**. This will initialize the instrument. Most parameters and settings are reset to the factory default values. The same procedure is required as above when the `DELETE MEAS.VAL.` display appears.

Addition to the section “5.6 Selection of the Sound Path Factor” (page 30) :

When you select “auto” for “Sound Path” described at the section “11.2 Settings for Dialogues and Menus”, the setting for the sound path factor will be automatic. In this case, “Reflection Mod” display will appear and you can select either “Diagonal Mode” by “no” or “Reflection Mode” by “yes”.



Addition to the section “5.6 Selection of the Sound Path Factor” (page 30) :

When the pipe outer diameter is more than 600mm, the sound path factor as “1” (one) is recommended. Otherwise, the measurement may become unstable when flow velocity or fluid temperature changed.

Addition to the section “5.7.2 Mounting of the Transducers” (page 31) :

The pipe wall thickness may slightly vary from part to part. Check it in advance by applying a wall thickness probe or some other ways and avoid mounting the transducers on such parts.

Addition to the section “5.7.2.4 Mounting with Fixtures” (page 32) :

Attention!	When using mounting fixtures, there may arise some air gap between the transducer surface and pipe wall because of any distortion of the pipe wall. Make sure to avoid having such air gap between them.

Addition to the section “6.1 Selection of the Physical Quantity and of the Unit of Measurement” (page 37) :

Attention!	In case of mass flow, select “Other Medium” as a measured fluid. When “Other Medium” has been selected, US300PM requests to enter the density which is used to calculate mass flow.

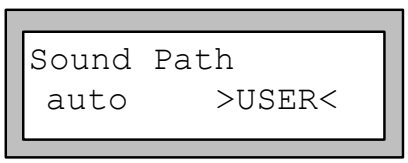
Changes to the section “7.2 Flow Totalizers” (page 41) :

Two of the key operations have been changed as below.

To reset the two flow totalizers to zero:	Press key Q_{ON} **8** three times when a totalizer is displayed.
To deactivate flow totalizing:	Press key **2** Q_{OFF} three times when a totalizer is displayed.

Addition to the section “11.2 Settings for Dialogues and Menus” (page 72) :

“Sound Path” setting appears next to “Meas.Point No.” and you can select “auto” or “user”. When you select “auto”, the setting for the sound path factor will be automatic.



Changes to the section “11.6 Charging the Battery” (page 77) :

Change “The chargeable NiCd-batteries guarantee an operating time of approximately 14 hours.”
to “The chargeable NiCd-batteries guarantee an operating time of approximately 10 hours at room temperature (20°C / 68°F), with full charge.”

Addition to the section “15.5 Activation of a Pulse Output” (page 101) :

Maximum pulse output rate is 2 pulse per second (+/-20%).

Set the “Pulse Value” and the “Pulse Width” so that the actual maximum flow in the pipe is less than half the displayed value (“Max – Value”).
Example:
The actual maximum flow 120m^3/h
Pulse Value = 0.02m^3
Pulse Width = 150ms

INFO: Max – Value
240.0m^3/h

Attention!
It is necessary to activate flow totalizers by pressing key Q_{ON} **8** to get the actual pulse output. Refer to the section 7.2 for flow totalizers.